



PTO/SB/08A (10-01)

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet

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of

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Complete if Known

Application Number	10/662,914
Filing Date	September 15, 2003
First Named Inventor	Lei et al.
Art Unit	1652
Examiner Name	Rebecca E. Prouty
Attorney Docket Number	19603/4261 (CRF D-2895A)

U.S. PATENT DOCUMENTS

Examiner Initials	Cite No. ¹	U.S. Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code ² (if known)				
	1	US-2002/0068350 A1		06/06/2002	Kondo et al.	
	2	US-2002/0102692 A1		08/01/2002	Lei	
	3	US-2002/0127218 A1		09/12/2002	Svendsen et al.	
	4	US-2002/0136754 A1		09/26/2002	Short et al.	
	5	US-2003/0092155 A1		05/15/2003	Kostrewa et al.	
	6	US-5,436,156		07/25/1995	Van Gorcom et al.	
	7	US-5,443,979		08/22/1995	Vanderbeke et al.	
	8	US-5,593,963		01/14/1997	Van Ooijen et al.	
	9	US-5,780,292		07/14/1998	Nevalainen et al.	
	10	US-5,834,286		11/10/1998	Nevalainen et al.	
	11	US-5,863,533		01/26/1999	Van Gorcom et al.	
	12	US-6,309,870		10/30/2001	Kondo et al.	
	13	US-6,350,602		02/26/2002	Van Gorcom et al.	
	14	US-6,391,605		05/21/2002	Kostrewa et al.	
	15	US-6,514,495		02/04/2003	Svendsen et al.	
	US-					
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	US-					

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Examiner Initials	Cite No. ¹	Foreign Patent Document		Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
		Country Code ³ Number ⁴	Kind Code ² (if known)				
	16	EP 0 420 358 B1		05/12/1999	Van Gorcom et al.		
	17	EP 0 684 313 A2		11/29/1995	Van Loon et al.		
	18	JP 10-276789		10/20/1998	Kosutoriwa et al.		X
	19	JP 2001-292789		10/23/2001	Van Loon et al.		X
	20	RU 2 113 468 C1		06/20/1998	Van Gorcom et al.		X
	21	WO 00/43503		07/27/2000	Lehmann		
	22	WO 86/01179		02/27/1986	Conti		
	23	WO 91/05053		04/18/1991	Van Gorcom et al.		
	24	WO 99/49022		09/30/1999	Svendsen		

Examiner Signature	<i>[Signature]</i>	Date Considered	6/29/06
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¹ Applicant's unique citation designation number (optional). ² See Kinds Codes of USPTO Patent Documents at 222.uspto.gov or MPEP 901.04. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

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Sheet 2 of 4

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Attorney Docket Number	19603/4261 (CRF D-2895A)

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS

Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
<i>Re</i>	25	GenBank Accession No. AAB96872 (January 16, 1998)	
	26	GenBank Accession No. M94550 (April 27, 1993)	
	27	GenBank Accession No. P34752 (January 25, 2005)	
	28	Han et al., "Expression of an <i>Aspergillus niger</i> Phytase Gene (<i>phyA</i>) in <i>Saccharomyces cerevisiae</i> ," <i>Appl. Environ. Microbiol.</i> 65(5):1915-1918 (1999)	
	29	Han et al., "Role of Glycosylation in the Functional Expression of an <i>Aspergillus niger</i> Phytase (<i>phyA</i>) in <i>Pichia pastoris</i> ," <i>Arch. Biochem. Biophys.</i> 364:83-90 (1999)	
	30	Kostrewa et al., "Crystal Structure of <i>Aspergillus niger</i> pH 2.5 Acid Phosphatase at 2.4 Å Resolution," <i>J. Mol. Biol.</i> 288:965-974 (1999)	
	31	Kostrewa et al., "Crystal Structure of Phytase from <i>Aspergillus ficuum</i> at 2.5 Å Resolution," <i>Nat. Struct. Biol.</i> 4:185-190 (1997)	
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	34	Lei et al., "Calcium Level Affects the Efficacy of Supplemental Microbial Phytase in Corn-Soybean Meal Diets of Weanling Pigs," <i>J. Anim. Sci.</i> 72(1):139-143 (1994)	
	35	Lei et al., "Nutritional Benefits of Phytase and Dietary Determinants of its Efficacy," <i>J. Appl. Anim. Res.</i> 17:97-112 (2000)	
	36	Lei et al., "Supplemental Microbial Phytase Improves Bioavailability of Dietary Zinc to Weanling Pigs," <i>J. Nutr.</i> 123:1117-1123 (1993)	
<i>Re</i>	37	Lei et al., "Supplementing Corn-Soybean Meal Diets with Microbial Phytase Linearly Improves Phytate Phosphorus Utilization by Weanling Pigs," <i>J. Anim. Sci.</i> 71:3359-3367 (1993)	

Examiner Signature	<i>Rebecca E. Prouty</i>	Date Considered	<i>6/29/03</i>
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				Group Art Unit	1652
				Examiner Name	Rebecca E. Prouty
Sheet	3	of	4	Attorney Docket Number	19603/4261 (CRF D-2895A)

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
	38	Mitchell et al., "The Phytase Subfamily of Histidine Acid Phosphatases: Isolation of Genes for Two Novel Phytases from the Fungi <i>Aspergillus terreus</i> and <i>Myceliophthora thermophila</i> ," <i>Microbiology</i> 143:245-252 (1997)			
	39	Mullaney et al., "Advances in Phytase Research," <i>Advances in Applied Microbiology</i> 47:157-199 (2000)			
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	41	Mullaney et al., "Positive Identification of a Lambda gt11 Clone Containing a Region of Fungal Phytase Gene by Immunoprobe and Sequence Verification," <i>Appl. Microbiol. Biotechnol.</i> 35:611-614 (1991)			
	42	Mullaney et al., "Site-Directed Mutagenesis of <i>Aspergillus niger</i> NRRL 3135 Phytase at Residue 300 to Enhance Catalysis at pH 4.0," <i>Biochem. Biophys. Res. Commun.</i> 297(4):1016-1020 (2002)			
	43	Nielsen et al., "The Determinants of α -Amylase pH-Activity Profiles," <i>Protein Eng.</i> 14(7):505-512 (2001)			
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	46	Pasamontes et al., "Gene Cloning, Purification, and Characterization of a Heat-Stable Phytase from the Fungus <i>Aspergillus fumigatus</i> ," <i>Appl. Environ. Microbiol.</i> 63(5):1696-1700 (1997)			
	47	Rodriguez et al., "Expression of the <i>Aspergillus fumigatus</i> Phytase Gene in <i>Pichia pastoris</i> and Characterization of the Recombinant Enzyme," <i>Biochem. Biophys. Res. Commun.</i> 268:373-378 (2000)			
	48	Rodriguez et al., "Site-Directed Mutagenesis Improves Catalytic Efficiency and Thermostability of <i>Escherichia coli</i> pH 2.5 Acid Phosphatase/Phytase Expressed in <i>Pichia pastoris</i> ," <i>Arch. Biochem. Biophys.</i> 382:105-112 (2000)			

Examiner Signature	<i>Debra L. Cole</i>	Date Considered	<i>Sept 16, 2003</i>
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	52	Ullah et al., "Cyclohexanedione Modification of Arginine at the Active Site of <i>Aspergillus ficuum</i> Phytase," <i>Biochem. Biophys. Res. Commun.</i> 178(1):45-53 (1991)	
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	56	van Hartingsveldt et al., "Cloning, Characterization and Overexpression of the Phytase-Encoding Gene (<i>phyA</i>) of <i>Aspergillus niger</i> ," <i>Gene</i> 127:87-94 (1993)	
	57	Wodzinski et al., "Phytase," <i>Adv. Appl. Microbiol.</i> 42:263-302 (1996)	
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	60	Yi et al., "Sites of Phytase Activity in the Gastrointestinal Tract of Young Pigs," <i>Animal Feed Science Technology</i> 61:361-368 (1996)	

Examiner Signature

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